

Research Summaries



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Recreational Boating on Lake Superior

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Introduction

Lake Superior is one of Minnesota's greatest water resources. But how does it rate as a resource for recreational boating? What problems or barriers to quality boating do boaters perceive regarding Lake Superior? How can these barriers be remedied?

To obtain answers to these and other questions related to the quality of boating in Minnesota, a statewide survey of registered Minnesota boat owners was conducted in 1988 by the University of Minnesota and the Minnesota Department of Natural Resources (DNR), funded by the DNR.

Nearly 700,000 boats were registered in Minnesota in 1989—about one boat for every 6.3 people living in the state. The research summarized in this report is based on a survey of 2,490 boat owners, projected to the entire population of Minnesota registered boat owners.



Use of Lake Superior for Boating

About one third (34%) of Minnesota boat owners—nearly 100,000 of the state's pleasure boat owners—had operated or had been a passenger on a boat on Lake Superior (anywhere on the lake) at least once during the five years (1983 through 1987) previous to the study; 66% had not (Figure 1). When questioned about the number of days they had personally boated on the lake, not surprisingly, most use was by a small percentage of all boaters. Heavy-use boaters, for example (those boating on the lake 21 or more days in the previous five years), represent about 7% of all boat owners but account for 74% of the lake use (Figure 2).

Boat owners in the northern and metro regions boated more on Lake Superior in the previous five years (36% and 38%, respectively) than boaters in the south (20%). Boat owners in the north were much more likely to be the heavy-use boaters of the lake than were metro residents—probably, in part, because of their closer proximity to the lake.

When boat owners were asked where they boated most frequently in 1987, both within 49 miles of home and 50 miles or more from home, some respondents specifically identified Lake Superior—about 5%, or nearly 15,000 of the pleasure boat owner households statewide. Nearly 60% of this boat use was in sailboats or motorized craft over 20 feet in length. A substan-

tial amount of this use, however—about 35%—was in boats 14 to 20 feet long.

Less than 50 miles from home. For those who boated on Lake Superior in 1987 and traveled less than 50 miles from home, the median number of days they boated was 20; however, 10% boated 100 days or more. Most of their use of the lake was for day trips (90%). Most of these boaters live near the lake—the median one-way driving distance from their permanent residence to the lake was only 7 miles. The majority of these boat owners (60%) typically transported their boat by vehicle to the lake and launched from either a free public access (53%) or marina (35%). Fishing was the main activity for their outing; it was cited by 55% of these respondents.

Figure 1. Have you operated or been a passenger on a boat on Lake Superior in the past five years?

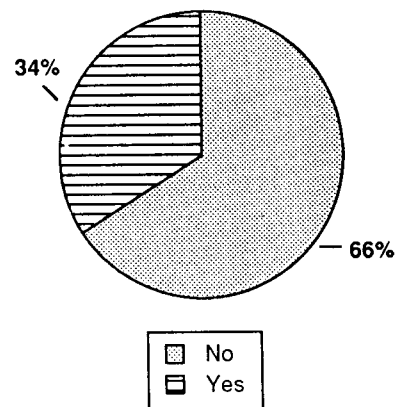
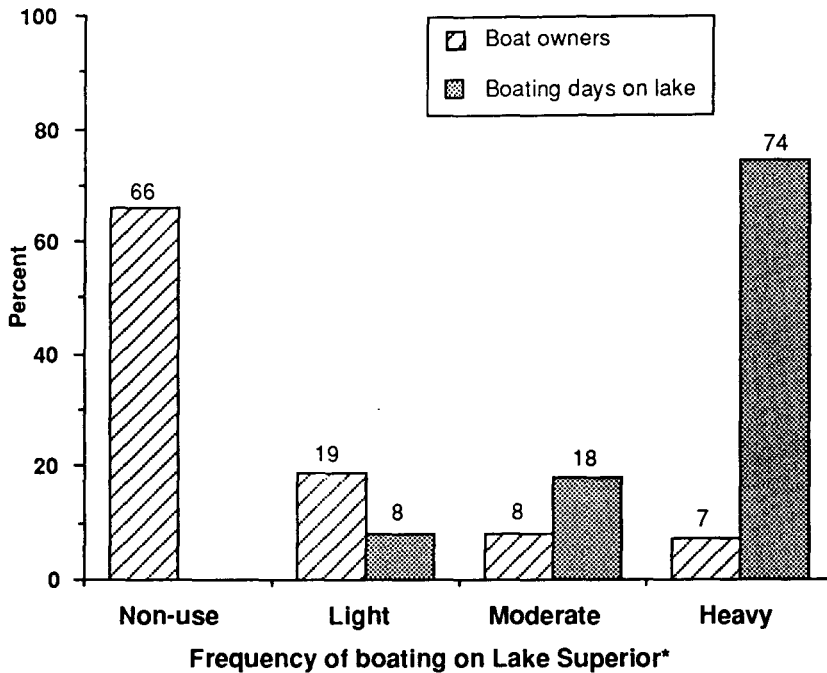
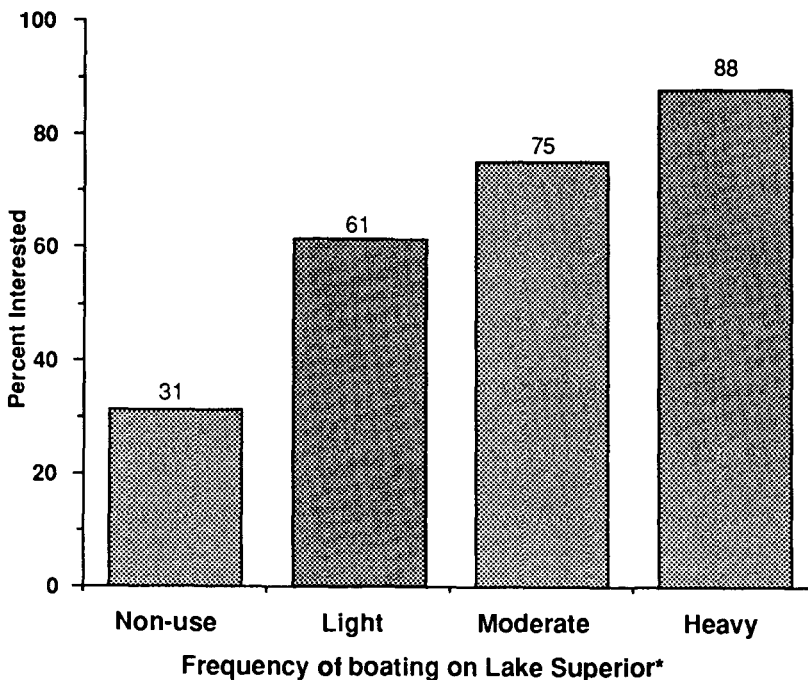


Figure 2. Boating use of Minnesota waters of Lake Superior in the past five years (1983-1987)



*Total days of boating in past five years: Light = 1 to 5 days, Moderate = 6 to 20 days, Heavy = 21 or more days

Figure 3. Interest in boating, or boating more often, on Minnesota waters of Lake Superior, based on frequency of boating in the past five years (1983-1987)



*Total days of boating in past five years: Light = 1 to 5 days, Moderate = 6 to 20 days, Heavy = 21 or more days

More than 49 miles from home. For those who boated on the lake and traveled more than 49 miles from home, the median number of days boated in 1987 was 7. None of these boat owners reported boating more than 60 days in 1987, but 14% did boat 25 or more days. Typically, these boat owners were on overnight outings (93%) as part of a trip away from home, such as on weekends or vacations. Their median one-way driving distance from home was 150 miles; 20% were 250 miles or more from their permanent residence. Surprisingly, an even higher percentage of these boat owners (73%) transported their boat by vehicle to the lake, compared with those who traveled less than 50 miles from home for their outing. Nearly half (49%) launched their boat at a free public access; 43% used the services of a marina. Again, fishing was the principal recreation activity, with 52% of the respondents mentioning it.

Demand for Lake Superior Boating

Lake Superior has the potential to become one of Minnesota's most important pleasure boating resources, based upon respondents' answers to questions about their interest in boating there more often in the future.

Among all the respondents, 44% indicated a desire to boat or boat more often on Minnesota waters of Lake Superior—representing about 125,000 of the pleasure boat owners statewide. About one quarter of the boat owners (26%) said they don't know; 30% said no, they weren't interested in boating or boating more often on the lake.

Among boaters who had boated on the lake in the previous five years, 69% expressed a desire to boat more often, although there was some variation among boaters based on how frequently they boated on the lake (Figure 3). Among boaters who had not boated recently on Lake Superior, almost one third (31%) indicated an interest in doing so.

Of those boat owners who singled out Lake Superior as the water body where they boated most frequently in 1987, 96% indicated a desire to boat more often on these waters. Another 2% were undecided;

only 2% said no, they weren't interested in boating more often.

Boat owners from the metro and northern regions had approximately equal interest in boating on Lake Superior in the future; 44% and 47%, respectively, expressed a desire to boat or boat more often. In the south, 35% of the respondents felt that way. Substantial numbers of boat owners, and about the same percentage of respondents in each region, were undecided about their future use of the lake—metro, 25%; north, 26%; and south, 29%.

Barriers to Boating on Lake Superior

Boat owners were asked why they haven't boated or boated more often on Minnesota waters of Lake Superior. Although some barriers may be difficult or impossible to remove (such as the lack of available time, unpleasant weather, and the expenses of boating there), it appears that many barriers might be reduced with expanded and innovative shoreline facilities, information, and educational programs.

Protected harbors and marinas. In response to questions regarding why they did not boat (or did not boat more often) on Lake Superior, about one third (29%) of the respondents agreed that there were not enough protected harbors available (Table 1). Nearly two thirds (61%) were undecided if the lack of protected harbors was or was not a barrier to their more frequent use of the lake; only 9% felt that this was not a barrier. A similar response emerged when asked if lack of marinas with permanent and transient slips, lodging, and food services was a barrier. About one fifth (22%) agreed; 64% were undecided; and 14% disagreed that this was a barrier.

A comparison was also made of boat owners who had operated or had been a passenger on a boat on Lake Superior during the preceding five years and those who had not. Owners with previous experience were more than twice as likely to agree that the lack of protected harbors was a barrier to their more frequent use of the lake—48% compared to 20% for those without previous experience (Table 1). Furthermore, those with previous experience (compared

to those without experience) were three times as likely to agree that the lack of marinas was a significant barrier—38% and 13%, respectively. Among those boat owners who did not use the lake in the previous five years but indicated a desire to do so, the lack of both protected harbors and marinas represented important barriers to their use of the lake—30% and 20%, respectively.

Boat owners who identified Lake Superior as the place where they boated most frequently in 1987 were in even more agreement that a lack of protected harbors and marinas are significant barriers to their more frequent use of this water body (Table 1). Stronger concern was voiced about not enough protected harbors than for a lack of marinas. The number of boat owners who were undecided if lack of these facilities was a barrier to their more frequent use was relatively small—especially concerning protected harbors (only 9%).

Boat owners in both the northern and metro regions had similar responses regarding whether or not the lack of protected harbors and marinas were barriers to their more frequent use of Lake Superior (Table 1). Not enough protected harbors seemed to be a greater barrier than not enough marinas, however. For boat owners who reside in the south, these facilities (or lack of them) were not as significant a barrier as in the other two regions.

These findings suggest that while there seems to be fairly strong support for additional protected harbors and marinas, this support is strongest from those already using the resource—especially those who use it more frequently than other water bodies.

Because so many Minnesota boat owners seemed undecided as to whether the lack of such facilities is a barrier to their more frequent use of the lake, it should not be

Table 1. Boat owners' opinions about whether lack of protected harbors and marinas are barriers to more frequent use of Lake Superior

Category of boat owner	Not enough protected harbors			Not enough marinas		
	Agree	Undecided	Disagree	Agree	Undecided	Disagree
	<i>percent</i>					
Boated on Lake in past 5 years	48	36	16	38	40	22
No experience in past 5 years	20	75	5	13	78	9
Lake most frequently used place in 1987	77	9	14	64	20	16
Northern region	34	57	9	24	60	16
Metro region	31	59	10	24	63	13
Southern region	18	75	7	13	76	11
All respondents	29	61	9	22	64	14

assumed that simply providing more marinas or harbors, or both, will be a panacea for the problem of attracting new boaters to Lake Superior. A combination of strategies may be required to expand or enhance use of the lake, including providing other facilities and services. Indeed, it may take additional study to assess the true influence of these and other facilities and services on future demand.

Other facilities and services. Those boaters who identified Lake Superior as where they boated most frequently in 1987 noted a variety of services and facilities, in addition to protected harbors and marinas, that, if available, would add to their enjoyment of Lake Superior. Facilities and services (from among 20 studied) that were identified by at least 50% of these boat owners as likely to add to their enjoyment were (in approximate order of importance): (1) buoys indicating water depths and hazards, (2) docks at the boat launch to ease launching, (3) toilets at public accesses, (4) car and trailer parking at public accesses, (5) boater "wayside areas" for day use only—acces-

sible only from the water and equipped with toilets and picnic facilities, (6) security lighting at the launch facility, (7) drinking water at the public access, (8) public campsites accessible only from water—with primitive facilities, (9) maps and other information about boating on the lake posted at launch facilities, and (10) public telephones at public accesses.

Information and education. Lack of knowledge about Lake Superior or lack of skills also may be barriers to boating on the lake. The following statements (reasons for not boating) are concerned with knowledge or skills related to the lake:

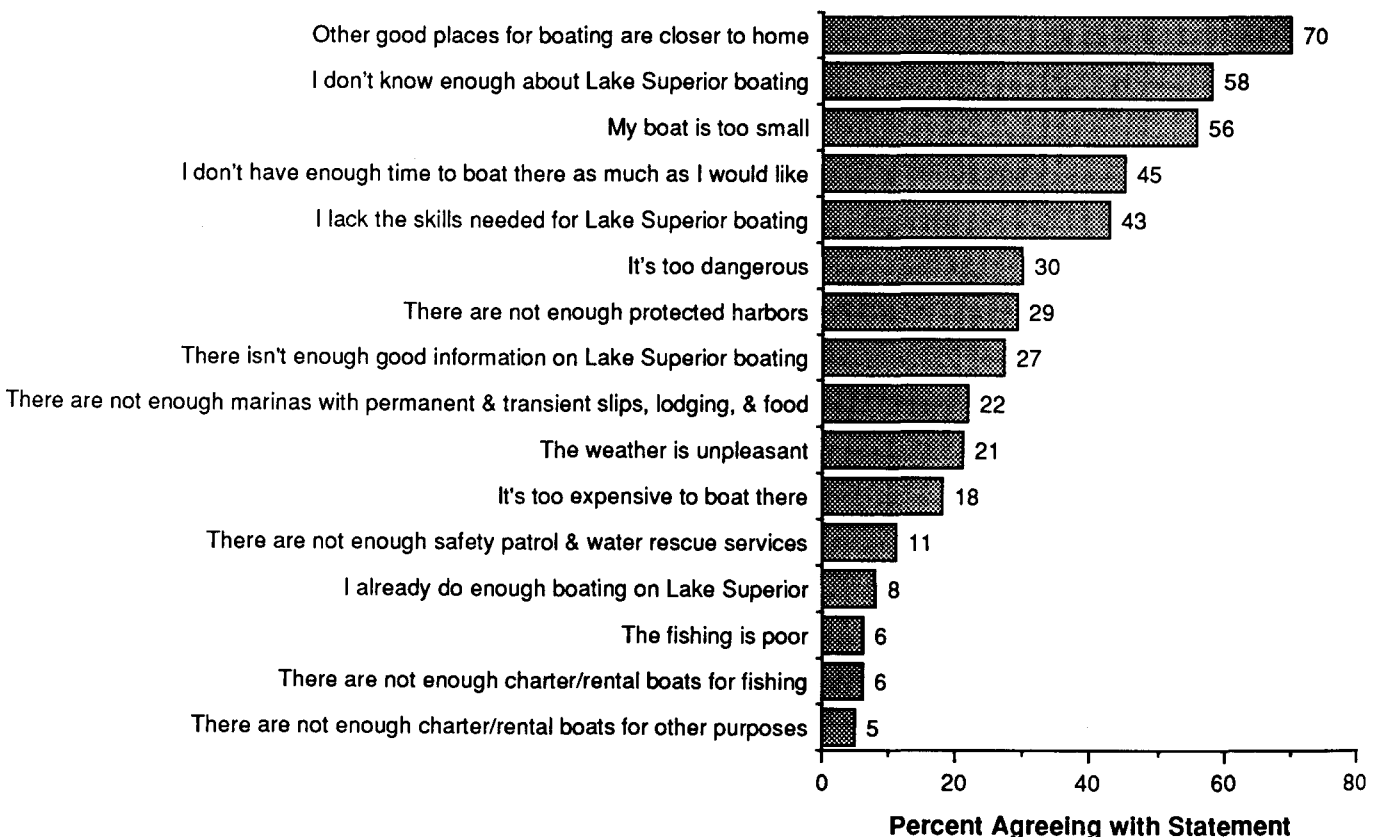
- I don't know enough about Lake Superior boating
- My boat is too small
- I lack the skills needed for Lake Superior boating
- It's too dangerous
- There isn't enough good information on Lake Superior boating
- The weather is unpleasant

As shown in Figure 4, many boaters agree that these are barriers. This suggests that improved information on what boating is like and what to expect on Lake Superior as well as what skills and equipment are needed to boat safely on the lake might be keys to expanding and enhancing boating activity.

Comparisons among different groupings of boat owners with respect to these reasons reveal no particular surprises. For instance, those with no or limited experience in boating on the lake agreed more with the above statements than those with moderate or extensive boating experience.

Comparisons by region where boat owners reside also show a high level of similarity among boaters in all three regions. Notable exceptions are: (1) residents in the metro region felt more strongly that there is not enough good information on Lake Superior boating—31% (metro) vs. 23% (north) and 24% (south), and (2) southern and metro region boaters agreed more that the lake was dangerous (37% and 33%, respec-

Figure 4. Reasons why Minnesota boat owners have not boated or have not boated more often on Minnesota waters of Lake Superior



tively) than did boaters in the northern region (27%).

Several other potential barriers that did not solicit strong agreement among boat owners were (1) there are not enough safety patrol and water rescue services, (2) the fishing is poor, and (3) there are not enough charter/rental boats for fishing and other purposes (Figure 4). As such, these apparently are not important barriers to boat owners' more frequent use of Lake Superior.

Other barriers. Four additional barriers were investigated (Figure 4) and, although they may have a bearing on whether or not people boat, their subsequent influence on boating participation generally cannot be altered by facilities, services, or information. Two of these reasons were noted as important barriers by many boat owners: (1) there are other places to boat closer to home (70%) and (2) I don't have enough time to boat there as much as I would like (45%).

The importance of these influences on the future behavior of boaters cannot be underestimated. Regardless of what might be done to enhance facilities, information, and boater training, a majority of Minnesota boat owners simply will find the lake too far in terms of time and distance and will continue to find acceptable and high quality boating opportunities closer to home.

Two other reasons studied—(1) it is too expensive to boat there and (2) I already do enough boating on Lake Superior—appear as relatively minor barriers to future use (18% and 8%, respectively).

Summary

Recreational use of Lake Superior for pleasure boating currently is not widespread, but many who visit this resource do so frequently and travel numerous miles to get there. Nearly half (44%) of the pleasure boat owners statewide expressed a desire to boat or to boat more often on the Minnesota waters of Lake Superior.

Demand for boating was highest among those boat owners with previous experience on the lake. Among those who boated on the lake in the five-year period 1983 through 1987, 69% expressed a desire to boat more often. Nearly a third of the owners who had not boated recently on the lake indicated a desire to do so.

In general there were more similarities than differences in the responses of boat owners from all three regions of the state (north, south, and metro) concerning their past boating experiences on Lake Superior and interest in boating on the lake more often in the future. Interest in Lake Superior was about the same statewide.

Some of the barriers to boat owners' more frequent use of Lake Superior can be remedied by the commercial sector or resource

management activities. Possible remedies include expanded efforts to provide protected harbors and marinas as well as better information and education programs to inform boaters about Lake Superior opportunities and needed skills and equipment to boat safely on the lake. These efforts are important not only for boaters who frequent the lake but also for many infrequent users and current nonusers as well.

Shoreline facilities, services, information, and education programs alone probably will not bring new throngs of boaters to Lake Superior, simply because most Minnesota boat owners live too far from the lake; most will continue to find acceptable boating opportunities close to home.

Many boat owners appear to be undecided about why they have not boated (or have not boated more often) on the Minnesota waters of Lake Superior. For many people, Lake Superior is a mystery as a place for pleasure boating. However, with expanded efforts to publicize the opportunities there, as well as expanded access and facilities both on the lake and nearby, Lake Superior should continue to grow as a popular and valued destination for numerous Minnesota boaters.

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1988 Survey of Minnesota Boat Owners—Study Design and Method

Access to Minnesota's lakes and streams is provided through many private and commercial facilities as well as through innumerable public canoe launches, beaches, and open stretches of shoreline. More than 2,200 free public water access sites are managed by federal, state, county, and local governments. Minnesota's Department of Natural Resources (DNR) manages nearly 1,200 of these sites.

Although a primary DNR activity is acquiring access to water bodies statewide, recent discussions have focused on managing these resources to better serve the boating public. What should the future direction be for managing the state's water resources to offer safe and rewarding boating opportunities?

In 1987, the authors, the University of Minnesota, and five units of the DNR (Boat and Water Safety, Fisheries, Planning, Trails and Waterways, and Waters) entered into a partnership to conduct a statewide survey of registered boat owners to determine how boaters use their pleasure boats on Minnesota waters and what they think about problems and issues related to boating. The study investigated these concerns for the state's waters as a whole and with specific reference to two of our largest water resources—the North Shore of Lake Superior and the

Mississippi River downstream from the Twin Cities.

In March and April, 1988, a mail-back questionnaire was sent to a representative sample of 3,200 registered boat owners drawn from the pool of 286,000 pleasure boat owners in the state licensed through the DNR. The survey sample was selected to enable comparisons to be made among the three regions of the state displayed in Figure 5, and among six major types of licensed pleasure boats: canoes and kayaks, other boats under 14 feet in length, sailboats 14 to 20 feet, sailboats more than 20 feet, other boats 14 to 20 feet, and other

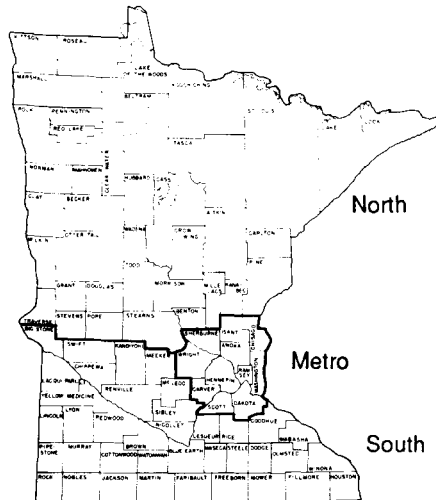
boats more than 20 feet in length. Other comparisons, such as those between boat owners who own or do not own riparian property, are also possible.

The questionnaire was comprised of 45 questions and took about 15 minutes to complete. The initial mailing and two follow-up reminders resulted in 2,490 owners returning the survey. About 100 surveys were eliminated from the original sample of 3,200, resulting in an overall adjusted response rate of 80 percent. This excellent response reflects Minnesota boat owners' strong interest in expressing their views, as well as the importance they place on the state's free public water accesses to achieve quality boating experiences.

Survey respondents may not be representative of the typical boat owner. The survey questionnaire requested the individual in the household "who goes boating most frequently" to respond to the survey. Therefore, the typical survey respondent may be somewhat older and a more experienced boater than the state's typical boat owner or boater.

Details about the study design and methods, the raw data, and the data summary tables are available from the authors and from the DNR's Office of Planning, 500 Lafayette Rd., St. Paul, MN 55155-4010 (612-296-0565).

Figure 5. Study Regions



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